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10/628,660	07/28/2003	Ramabadran S. Raghavan	LUCW:0003	4409

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EXAMINER

AJIBADE AKONAI, OLUMIDE

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/628,660	Applicant(s) RAGHAVAN ET AL.	
	Examiner Olumide T. Ajibade-Akonai	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/08/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

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The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 17 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It appears the Applicant has amended claim 17 to reflect the premise of the argument that the tangible medium with a software program for use in the wireless communication system comprises "***a controller to process information communicated with the at least one base station, wherein the controller is located between the base station and a mobile switching center***". Consequently, after further evaluation of the specification, specifically on page 8, lines 17-24, page 9, and page 10, lines 1-7, the Applicant asserts "***an***

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access network unit 12 connected to various transceiver units 14A-E via a public network 16 such as the internet". Therefore, the newly added limitation of "a controller which is adapted to process information communicated with the at least one base station, wherein the controller is located between the base station and a mobile switching center" is not adequately supported by the original specification and constitutes new matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 3, 4, 5, 8, 9, 10, 11, 17-21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Naghian et al (6,879,574)**.

6. Regarding **claim 1**, Chen et al discloses a transceiver unit (base station 204, with transmit unit 268 and receive unit 254, see fig. 2, p. 2 [0025], p. 3, [0026]) for use with a wireless communication system (group communication system 100, see fig. 1, p. 2, [0017]), the transceiver unit comprising: an antenna configured to receive a wireless transmission (antenna 250, see fig. 2, p.2, [0025]) a communication interface (base station controller, BSC 110, see fig. 1, p. 2, [0019]) to facilitate communication between the transceiver and an access network unit (group call server performs call initiations and interacts with the

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communication devices, see p. 2, [0019], p. 3, [0029]) over an undedicated public network (IP protocol network 108, see p. 2, [0019]).

Chen fails to disclose wherein the communication between the transceiver unit and the access network unit is independent of a dedicated network.

In the same field of endeavor, Naghian discloses wherein the communication between the transceiver unit (wireless routers 125 in core network 120, see fig. 1, col. 14, lines 11-14) and the access network unit (MN 105, see fig. 1, col. 14, lines 19-24) is independent of a dedicated network (WLAN 145, see fig. 1, col. 14, lines 19-24).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Naghian into the system of Chen for the benefit of establishing an ad-hoc network.

Regarding **claim 2**, as applied to claim 1, Chen et al further discloses wherein the communication interface (base station controller, BSC 110, see fig. 1, p. 2, [0019]) comprises at least one protocol layer (BSC issues an internet group management protocol, IGMP to disconnect a multicast tree see p. 5-6, [0055]).

Regarding **claim 3**, as applied to claim 2, Chen et al further discloses wherein the at least one protocol layer maintains an IP address of the access network (the BSC binds each communicating device with the multicast IP-multicast address of a particular group call server).

Regarding **claim 4**, as applied to claim 2, Chen et al further discloses wherein the at least one protocol layer (transmitter data processor 264, see p. 2, [0026]) converts information (voice and/or packet data, see p. 2, [0026]) received from the access network unit (data source 262, see p. 2, [0026]) over the public network to RF signals (transmitter unit 268 converts voice and/or packet data to analog signals, see p. 3, [0026]) to be communicated by the transceiver over an air interface (voice and/or data is exchanged between base station 204 and mobile station 206 over via an air interface, see p. 2, [0022]).

Regarding **claim 5**, as applied to claim 2, Chen et al further discloses wherein at least one protocol layer converts RF signals (communication devices have IP connectivity with GCS 102, reverse link signal sent from mobile station 206 to base station 204, and base station receive data processor 58 recovers the voice/packet data, and the BSC sends media 622 received from a callers communication device to group call server, see p. 2, [0019], [0023]-[0025], p. 5, [0048]) received by the transceiver (base station 204, see fig. 2, p. 2, [0025]) over an air interface (air interface 208, see fig. 2, p. 2, [0022]) to information suitable for transmission over the public network (IP network 108, see fig. 1, p. 2, [0019]) to the access network controller (group call server 102, see fig. 1, p. 2, [0019]).

Regarding **claim 8**, as applied to claim 2, Chen et al further discloses wherein the at least one protocol layer (user datagram protocol, UDP see p. 2, [0020]) encapsulates higher protocol layer information (real-time protocol, RTP, see p. 2, [0020]) to facilitate protocol requirements over the public network.

Regarding **claim 9**, as applied to claim 2, Chen et al further discloses wherein at least one protocol layer comprises at least on technology dependent protocol layer (BSC issues an internet group management protocol, IGMP to disconnect a multicast tree see p. 5-6, [0055]).

Regarding **claim 10** as applied to claim 1, Chen et al further discloses wherein the public network comprises the internet (IP network 108, see fig. 1, p. 1, [0019]).

Regarding **claim 11**, as applied to claim 1, Chen et al further discloses wherein the transceiver unit comprising at least one antenna (antenna 250, see fig. 2, p. 2, [0025]) to facilitate communications between the receiver unit (base station 204, see fig. 2, p. 2, [0024]) and at least one portable communications device (mobile station 206, see fig. 2, p. 2, [0023]) over an air interface (mobile station 206 communicating with base station 204 over an air interface, see p. 2, [0022]).

Regarding **claim 17**, Chen et al further teaches a tangible medium (general purpose processor, DSP, ASIC, FPGA or programmable logic device, see p. 6, [0059]) having a software program (logic block, modules, and algorithm steps described can be implemented as computer software) for use in a wireless communication system (group communication system 100, see p. 2, [0017]), the software program comprising: at least one routine for facilitating communication of information (call set-up process, see fig. 6, p. 4, [0039]) over an undedicated public network (IP network 108, see fig. 1, p. 2, [0019]) between at least one base station (base station 204 with a transceiver and receiver unit, see fig. 2, p.

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2, [0025]), which is adapted to communicate over an air interface with portable communications devices (voice and/or data is exchanged between base station 204 and mobile station 206 over via an air interface, see p. 2, [0022]), and a controller (base station controller, BSC 110, see fig. 1, p. 2, [0019]), which is adapted to process information communicated with the as least one base station, wherein the controller is located between the base station and a mobile switching center (mobile station 206 with transmit and receive unit, and call set-up process in which mobile station communication device sends a group call request 604 to group call server in order to set up a group call, see fig. 2 and fig. 6, p. 2, [0023], p. 4, [0039]).

Chen fails to disclose wherein the software program comprises at least one routine for facilitating communication of information over an undedicated public network.

In the same field of endeavor, Naghian wherein the software program comprises at least one routine for facilitating communication of information over an undedicated public network (wireless routers 125 in core network 120 transmits from the WLAN 145 to MN 105 , see fig. 1, col. 14, lines 11-24).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Naghian into the system of Chen for the benefit of establishing an ad-hoc network.

Regarding **claim 18**, as applied to claim 17, Chen et al further discloses wherein the at least one routine facilitates communication information over the

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internet (communication devices 104 may have IP connectivity to group call server 102 through the IP network 108, see fig. 1, p. 2, [0019]).

Regarding **claim 19**, as applied to claim 17, Chen et al further discloses wherein the at least one routine comprises at least one protocol layer (session initiation protocol, SIP, see p. 2, [0020]) adapted to facilitate communication over the public network (communication devices 104 perform registration with group call server 108 using session initiation protocol, SIP, see p. 2, [0020]).

Regarding **claim 20**, Chen et al discloses a method of producing an information packet in a wireless communication system, the method comprising the acts of: receiving information from a transceiver unit via an air interface (mobile station 206 communicating with base station 204 over an air interface, see p. 2, [0022]); processing the information to form an information packet (base station demodulator 256 processes received signal and processor 258 decodes the symbols to recover the data and messages, see fig. 2, p. 2, [0025]) suitable for transmission to an access network via an undedicated public network (BSC sends media 622 that it has received from communication device to group call server, see fig. 6, p. 5, [0048]).

Chen fails to disclose transmitting the information packet to a controller independent of a dedicated connection.

In the same field of endeavor, Naghian discloses transmitting the information packet to a controller independent of a dedicated connection (wireless routers 125 in core network 120 transmits from the WLAN 145 to MN 105, see fig. 1, col. 14, lines 11-24).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Naghian into the system of Chen for the benefit of establishing an ad-hoc network.

Regarding **claim 21**, as applied to claim 20, Chen et al further discloses wherein the public network comprises the internet (IP protocol network 108, see p. 2, [0019]).

Regarding **claim 23**, as applied to claim 1, Chen further discloses wherein the access net work unit comprises a base station controller (base station controller, BSC 110, see fig. 1, p. 2, [0019]).

Regarding **claim 24**, as applied to claim 20, Chen, as modified by Naghian discloses the claimed invention.

Chen fails to disclose wherein transmitting the information packet to the controller comprises transmitting the information packet to a base station controller.

Naghian, however, further discloses wherein transmitting the information packet to the controller comprises transmitting the information packet to a base station controller (wireless routers 125 in core network 120 transmits from the WLAN 145 to MN 105 , see fig. 1, col. 14, lines 11-24).

It would therefore have been obvious to one of ordinary skill in the art to the combination of Chen and Naghian for the benefit of establishing an ad-hoc network.

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7. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Naghian et al (6,879,574)** as applied to claim 2 above, and further in view of **Kowalski et al (6,631,410)**.

Regarding **claim 6**, as applied to claim 2, Chen et al, as modified by Naghian discloses the claimed invention except wherein the at least one protocol layer provides security information to the network access unit to facilitate secure communication over the public network.

In the same field of endeavor, Kowalski et al teaches wherein the at least one protocol layer (a protocol that employs the MAC layer, see col. 5, lines 41-45) provides security information the network access unit (see col. 5, lines 5-15) to facilitate secure communication over the public network (security, see col. 5, lines 41-45).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kowalski et al into the system of Chen et al and Naghian for the benefit of providing secure multimedia content to a network.

Regarding **claim 7**, as applied to claim 2, Chen et al, as modified by Naghian discloses the claimed invention except wherein the at least one protocol layer negotiates quality of service for communications with the access network over the public network.

In the same field of endeavor Kowalski discloses wherein the at least one protocol layer (a protocol that employs the MAC layer, see col. 5, lines

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41-45) negotiates quality of service for communications (QoS, see col. 5, lines 41-45) with the access network unit (see col. 5, lines 5-15) over the public network (see col. 5, lines 5-15, 41-45).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kowalski et al into the system of Chen et al and Naghian for the benefit providing reliable broadcast applications to small office/home networks.

1. Claims 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Naghian et al (6,879,574)** as applied to claim 1 above, and further in view of **Eilers et al "Reradiation (Echo) Analysis of a Tapered Tower Section Supporting a Side-Mounted DTV Broadcast Antenna and Corresponding Azimuth Pattern"**.

Regarding **claim 12**, as applied to claim 11, Chen et al, as modified by Naghian discloses the claimed invention except the transceiver unit comprising a structure on which the at least one antenna resides.

In the same field of endeavor, Eilers et al discloses the transceiver unit comprising a structure on which the at least one antenna resides (side-mounted antenna on a tower, see fig. 1, p. 249, paragraphs 2-3).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Eilers et al into the system of Chen and Naghian for the benefit of determining the azimuth pattern.

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Regarding **claim 13**, as applied to claim 12, the combination of Chen et al, Naghian and Eilers et al disclose the claimed invention (see claim 12).

Chen et al and Naghian fail to disclose wherein the structure comprises a tower.

Eilers et al discloses wherein the structure comprises a tower resides (side-mounted antenna on a tower, see fig. 1, p. 249, paragraphs 2-3).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Chen, Naghian and Eilers by including wherein the structure comprises a tower for the benefit of determining the azimuth pattern.

Regarding **claim 14**, as applied to claim 12, the combination of Chen et al, Naghian and Eilers et al disclose the claimed invention.

Chen et al fails to disclose wherein the structure comprises a building.

Eilers et al discloses wherein the structure comprises a tower resides (side-mounted antenna on a tower, see fig. 1, p. 249, paragraphs 2-3).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Chen, Naghian and Eilers et al by including wherein the structure comprises a building for the benefit of determining the azimuth pattern.

2. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Naghian et al (6,879,574)** as applied to claim 1 above, and further in view of **Ketonen (6,104,917)**.

Regarding **claim 15**, as applied to claim 1, Chen et al, as modified by Naghian discloses the claimed invention except wherein the transceiver comprising a structure for housing the communication interface.

In the same field of endeavor, Ketonen discloses wherein the transceiver comprising a structure for housing the communication interface (base station transceiver circuitry are housed within a cabinet, see col. 3, lines 13-15).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Ketonen into the system of Chen et al for the benefit of maintaining the temperature level of the radio circuitry.

Regarding **claim 16**, as applied to claim 15, the combination of Chen et al, Naghian and Ketonen disclose the claimed invention.

Chen et al fails to disclose wherein the structure comprises a cabinet.

Ketonen discloses wherein the structure comprises a cabinet (base station transceiver circuitry are housed within a cabinet, see col. 3, lines 13-15).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Ketonen, Chen et al and Naghian by including wherein the structure comprises a cabinet for the benefit of maintaining the temperature level of the radio circuitry.

3. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Naghian et al (6,879,574)** as applied to claim 2 above, and further in view of **Onweller et al (6,931,102)**.

Regarding **claim 22**, as applied to claim 1, Chen et al, as modified by

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Naghian discloses the claimed invention except wherein the transceiver is assigned an IP address to facilitate communications with the access network unit over the undedicated public network.

In the same field of endeavor, Onweller et al teaches wherein the transceiver (transceiver 66, see fig. 2, col. 7, line 36) is assigned an IP address (Unix server 80 assigns an IP address to transceiver 66, see col. 7, lines 36-37) to facilitate communications with the access network unit (hub 60, see fig. 2, col. 7, lines 1-6) over the undedicated public network (IP network 34, see fig. 2, col. 7, lines 1-7, 36-48).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Onweller et al into the system of Chen et al and Naghian for the benefit of providing communication between a wireless local area network and a central office.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto (20020038353) discloses a weather information delivery system and method thereof.

Bender et al (20020052204) discloses a method and apparatus for rapid assignment of a traffic channel in digital cellular communication systems.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

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See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

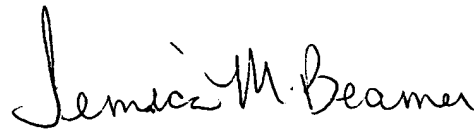
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olumide T. Ajibade-Akonai whose telephone number is 571-272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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